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EXAMINER	
DESIR, PIERRE LOUIS	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/635,940	HULL ET AL.	
	Examiner	Art Unit	
	Pierre-Louis Desir	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-29 and 31-51* is/are rejected.

7)☒ Claim(s) *5 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-51 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either

is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-51 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-33 of copending Application No. 10/904000. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-51 of the present application are a broader version of claims 1-32 of copending Application No. 10/904000.

Independent claim 1 of the present Application is a combination of claims 1 and 8 of copending Application No. 10/904000.

Independent claim 26 of the present Application is a combination of claim 24

Claims 1 and 8 of the copending Application No. 10/904000 include all of the limitations of claim 1 of the instant application as follows:

A method of providing information about a real-world space, comprising: (a) as users move through said space, virtual markers are deposited and stored as marker data to indicate associated locations visited by the users in the space, wherein the markers each have an initial strength value and the strength values associated with the deposited markers, either taken individually before aggregation or in the location-dependent aggregations, are caused to decay with time (see claims 1 and 8 of the copending Application cited above).

However, Claim 1 of the copending Application also includes that the stored marker data is used to provide trail information for guiding users in the space; wherein an operator, using an interface unit and without the need to move around said space, modifies the stored marker data or its significance whereby to modify the trail information derived therefrom.

Nonetheless, the removal of said limitation from claim 1 of the present application made claim 1 a broader version of claim 1. Therefore, since omission of an element perform the same function as before (in re Karlson (CCPA 136 USPQ 184 (1963)), claim 1 is not patentably distinct from claim 1 of the present Application.

Claims 2-23 of the copending Application No. 10/904000 include all of the limitations of claims 2-25 of the present Application.

Claims 8-33 of the copending Application 10/904000 include all of the limitations of claims 26-41 of the present application.

The same reasoning as applied to claim 1 of the present application is applied to the remaining claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 6-16, 23-29, 31-40, 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kabala, U.S. Patent No. 6539393, in view of Adams, U.S. Patent No. 5963944, and Sumi et al (Sumi), JP 11096230 (cited by Applicant).

Regarding claim 1, Kabala discloses a method of providing information about a real-world space, comprising as a user moves through said space, depositing and storing virtual markers to indicate associated locations visited by the user in the space (see fig. 1, col. 4, lines 52-63), the virtual markers each having an initial strength value (see col. 5, lines 52-59).

Although Kabala discloses a method as described, Kabala does not specifically disclose a method wherein the virtual markers each having an initial strength value causing the strength values associated with the markers, either taken in location-dependent aggregations or individually to decay with time after the markers have been stored; using data about the current strength of the stored markers of multiple locations to provide an information item relevant to use of the space, either in aggregation or individually, is used to provide information relevant to use of the space.

However, Adams discloses a method wherein the virtual markers each having an initial strength value causing the strength values associated with the markers, either taken in location-dependent aggregations or individually to decay with time after the markers have been stored (i.e., timing information 114 in the form of time-decaying markers left by various agents 120 that visit node 100 may also provide useful information to agents 120 that visit the node subsequently. For example, an index agent 122 carrying index

block data (loaded agent) and sampling network nodes, may leave a time-decaying signal in memory store 114 to mark how recently it has been to node 100. If loaded index agent 122 revisits node 100 and samples store 114 before the signal decays, it will recognize that it has been to node 100 recently. If the decay time is selected to reflect, for example, the average time between data retrieval and deposits for an agent, an agent recognizing its own time marker at a node can assume that it already sampled the node with its current data load and need not sample the node's data store 130 again) (see col. 5, lines 20-35).

Sumi discloses a method wherein data about the current strength of the stored markers of multiple locations is used to provide an information item relevant to use of the space (see abstract)--- One skilled in the art would immediately conceptualize that as the user moves from location to location, data corresponding to the user's interests and data relevant to the use of the location is being provided to the user. Also, it is worth noted, it would have also been obvious to one of ordinary skill in the art to conceptualize (referring to Sumi) that as the visitor moves from location to location, the strength value associated with the location where the user is located will be increased to facilitate the displaying of information (personal interests) to the visitor (see Sumi's abstract).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention to combine the teachings as described by the references to arrive at the claimed invention. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been to enhance user's participation by providing to the user information based on estimated interests.

Regarding claims 2-27, Kabala discloses a method and apparatus as described (see claims 1 and 26 rejections).

Although Kabala discloses a method and apparatus as described, kabala does not specifically disclose a method and apparatus wherein depositing and storing the virtual markers comprise individually storing the virtual markers; and wherein causing the strength values to decay comprises causing the strength values to decay individually, the current strength values of the individual markers being aggregated on a location dependent basis for using data about the current strength of the stored markers of multiple locations.

However, Adams discloses a method and apparatus wherein depositing and storing the virtual markers comprise individually storing the virtual markers; and wherein causing the strength values to decay comprises causing the strength values to decay individually, the current strength values of the individual markers being aggregated on a location dependent basis for using data about the current strength of the stored markers of multiple locations (i.e., timing information 114 in the form of time-decaying markers left by various agents 120 that visit node 100 may also provide useful information to agents 120 that visit the node subsequently. For example, an index agent 122 carrying index block data (loaded agent) and sampling network nodes, may leave a time-decaying signal in memory store 114 to mark how recently it has been to node 100. If loaded index agent 122 revisits node 100 and samples store 114 before the signal decays, it will recognize that it has been to node 100 recently. If the decay time is selected to reflect, for example, the average time between data retrieval and deposits for an agent, an agent recognizing its

own time marker at a node can assume that it already sampled the node with its current data load and need not sample the node's data store 130 again) (see col. 5, lines 20-35)

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention to combine the teachings as described by the references to arrive at the claimed invention. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been to enhance user's participation by providing to the user information based on estimated interests.

Regarding claims 3 and 28, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein each newly-deposited virtual marker is aggregated on a location-dependent basis with previously-deposited virtual markers by having its initial strength value aggregated with an existing aggregated strength value, if any, for the previously-deposited markers associated with the same location as the newly-deposited marker, this aggregation constituting, or being effected at the same time as, storage of the newly-deposited marker (i.e., the booths 180 and 190 each has multiple transceivers disposed in respective booths to better discriminate visits by show attendees to different products displayed at their booths. For example, at booth 180 transceivers 180 to 184 are used to cover four different products. As such, when the attendees view a product, he typically faces the product and transmissions from his badge on the name tag are received by the respective transceiver disposed proximal to that product. The transceivers send the signal strength received from the badge transmissions. If multiple transceivers report receiving the same badge ID code, the signal strength indication could be used to better discriminate the location of the attendee) (see col. 5, lines 40-57); causing the strength

values being applied to decay with time (see col. 5, lines 1-29, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 4 and 29, Kabala discloses a method and apparatus (see claims 3 and 27 rejections) wherein a plurality of storage location cells are provided that each corresponds to a respective area of said space and holds the aggregated strength value for markers deposited in locations within that area (i.e., a plurality of transceivers modules cover different areas) (see figs. 1-2, col. 6, lines 11-13, and col. 7, lines 22-24)), each marker being stored and aggregated by having its initial strength value added to the existing aggregated strength value stored in the location cell that corresponds to the area covering the location associated with the marker (i.e., comparing the signal strengths) (see col. 6, lines 1-45, col. 8, lines 6-38, and col. 11, lines 39-43). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 6 and 31, Kabala discloses a method and apparatus (see claims 1and 26 rejections), wherein causing the strength values to decay is effected as a preliminary to using data about the current strength of the stored markers of multiple locations (see abstract, col. 4, lines 57-59, col. 5, lines 1-29, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 7 and 32, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein causing the strength values to decay is effected independently of using data about the current strength of the stored markers of multiple locations (see abstract, col. 4, lines 57-59, col. 5, lines 1-29, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 8 and 33, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein causing the strength values to decay comprises decaying the strength values are decayed by a fixed amount per unit time (see col. 2, lines 27-31, col. 4, lines 57-59, col. 5, lines 1-29, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 9 and 34, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein causing the strength values to decay comprises decaying the strength values are decayed by a fixed proportion per unit time (see col. 2, lines 27-31, col. 4, lines 57-59, col. 5, lines 1-29, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 10 and 35, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein multiple strength values are associated with each marker or marker aggregation (see col. 4, lines 52-59), causing the strength values to decay involving decaying these multiple strength values at different rates whereby to produce multiple current strength values for each stored marker or marker aggregation (see col. 4, lines 57-59, col. 5, lines 1-29, col. 5, lines 53-57, and col. 6, lines 1-45); using the data about the current strength of the stored markers of multiple location comprising providing multiple types of information with the current strength values used when deriving a said information being dependent on its type (see abstract and col. 7, lines 63-67).

Although Kabala discloses a method and apparatus as described, Kabala does not specifically disclose a method and apparatus wherein data about data about the current strength of the stored markers of multiple locations is used to provide an information item relevant to use of the space.

However, Sumi (cited by applicant) discloses a method and apparatus wherein a portable information terminal equipment and a badge are delivered to each visitor at the entrance of an exhibition hall. Sensors in respective exhibition rooms detect an identification signal from the badge carried by the visitor and an active badge system discriminates the current position and visiting history of the visitor based on detection signals from respective sensors and applies the discriminated information to an information providing server. The server estimates the interests of the visitor by using the current position and visiting history, and in a process that the visitor observes displays in respective exhibition rooms, sends personal information corresponding to the visitor's interests to the equipment to display the information (see abstract). One skilled in the art would immediately conceptualize that as the user moves from location to location, data corresponding to the user's interests and data relevant to the use of the location is being provided to the user. Also, it is worth noted, it would have also been obvious to one of ordinary skill in the art to conceptualize (referring to Sumi) that as the visitor moves from location to location, the strength value associated with the location where the user is located will be increased to facilitate the displaying of information (personal interests) to the visitor (see Sumi's abstract). **Also refer to Adams col. 5, lines 20-44).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been to enhance user's participation by providing to the user information based on estimated interests.

Regarding claims 11 and 36, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein when depositing and storing virtual markers, at least some

of said markers are deposited with respective indicators as to whether or not the strength of the marker is to be decayed (see col. 2, lines 27-31, col. 4, lines 57-59, col. 5, lines 1-29, and col. 6, lines 1-45); causing the strength values to decay further comprising, for a said marker deposited with a said indicator, checking said indicator and decaying or not decaying the strength of the marker accordingly (see col. 4, lines 57-59, col. 5, lines 1-29, col. 5, lines 53-57, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

Regarding claim 12, Kabala discloses a method (see claim 1 rejection) wherein said virtual markers are deposited automatically at one of: predetermined intervals of time (see col. 5, lines 1-5).

Regarding claims 13 and 37, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein the said virtual markers deposited in respect of each user are deposited by a mobile device carried by the user (i.e., portable wireless transmitters for transmitting identification code) (see abstract). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 14 and 38, Kabala discloses a method and apparatus (see claim 13 and 37 rejections) wherein the virtual markers are stored in a central system (i.e., the system comprises memory for storing a list of the wireless transmitters, its identification code) (see col. 3, lines 13-16).

Regarding claims 15 and 39, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein the said virtual markers are deposited and stored by an infrastructure system that monitors the locations of the users (i.e., central processor) (see abstract). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 16 and 40, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein in depositing and storing, the virtual markers deposited in respect of a first said user have associated data indicative of the user concerned and are individually stored (see col. 4, lines 57-59, col. 5, lines 1-29, col. 5, lines 53-57, and col. 6, lines 1-45), using data about the current strength of the stored markers of multiple locations involving providing information item (also refer to Sumi) about the path taken by the first user by identifying the virtual markers associated with that user and using the relative strength values of the markers to determine the direction of progression of the user concerned along said path (see col. 4, lines 52-63, col. 5, lines 1-29, col. 5, lines 53-57, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 23 and 47, Kabala discloses a method and apparatus (see claims 1 and 26 rejections and reasoning) wherein depositing and storing virtual markers comprises depositing said virtual marker whenever said user visits a location corresponding to a feature of interest in the space (see col. 5, lines 50-55), using data about the current strength of the stored markers of multiple locations involving using the current-strength data of feature-related marker aggregations to provide, as said information item, information about the popularity of the relative features concerned (see fig. 6, col. 9, lines 18-22). **Also refer to Adams col. 5, lines 20-44).**

Regarding claims 24 and 48, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein depositing and storing virtual markers comprises depositing said virtual marker upon a said user requesting, whilst at a location corresponding to a feature of interest in the space, to be presented with a media item concerning that feature (see col. 4, lines 52-63, and col. 5, lines 50-55); using data about the current strength of

the stored markers of multiple locations involving using the current-strength data of feature-related marker aggregations to provide information about the popularity of the features concerned (see fig. 6, col. 9, lines 18-22).

Although Kabala discloses a method and apparatus as described, Kabala does not specifically disclose a method and apparatus comprising using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space.

However, Sumi (cited by applicant) discloses a method wherein a portable information terminal equipment and a badge are delivered to each visitor at the entrance of an exhibition hall. Sensors in respective exhibition rooms detect an identification signal from the badge carried by the visitor and an active badge system discriminates the current position and visiting history of the visitor based on detection signals from respective sensors and applies the discriminated information to an information providing server. The server estimates the interests of the visitor by using the current position and visiting history, and in a process that the visitor observes displays in respective exhibition rooms, sends personal information corresponding to the visitor's interests to the equipment to display the information (see abstract). One skilled in the art would immediately conceptualize that as the user moves from location to location, data corresponding to the user's interests and data relevant to the use of the location is being provided to the user. **Also refer to Adams col. 5, lines 20-44).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed

invention. A motivation for doing so would have been to enhance user's participation by providing to the user information based on estimated interests.

Regarding claims 25 and 49, Kabala discloses a method and apparatus as described above (see claims 1 and 26 rejections).

Although Kabala discloses a method and apparatus as described, Kabala does not specifically disclose a method and apparatus wherein using data about the current strength of the stored markers of multiple locations is effected for a further user moving through the space with said information being provided to that user.

However, Sumi (cited by applicant) discloses a method and apparatus wherein a portable information terminal equipment and a badge are delivered to each visitor at the entrance of an exhibition hall. Sensors in respective exhibition rooms detect an identification signal from the badge carried by the visitor and an active badge system discriminates the current position and visiting history of the visitor based on detection signals from respective sensors and applies the discriminated information to an information providing server. The server estimates the interests of the visitor by using the current position and visiting history, and in a process that the visitor observes displays in respective exhibition rooms, sends personal information corresponding to the visitor's interests to the equipment to display the information (see abstract). One skilled in the art would immediately conceptualize that as the user moves from location to location, data corresponding to the user's interests and data relevant to the use of the location is being provided to the user. **Also refer to Adams col. 5, lines 20-44).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed

invention. A motivation for doing so would have been to enhance user's participation by providing to the user information based on estimated interests.

Regarding claim 26, Kabala discloses an apparatus for providing information about a real-world space, the apparatus comprising: a first arrangement arranged to deposit and store virtual markers to indicate associated locations visited by each of multiple users in the space (see fig. 1, col. 4, lines 52-63).

Although Kabala discloses an apparatus wherein the central processor retrieves the information entered by operators when the attendees registered for the show to archive a list having identity of the attendees, the places of booths visited (location of the booth), the times and duration of the visits) (see fig. 1, col. 4, lines 63-67), Kabala does not specifically disclose an apparatus comprising a second arrangement arranged to decay with time the strength values associated with the markers after the markers have been stored, either taken in location-dependent aggregations or individually; and a third arrangement having a data-processing system arranged to use data about the current strength of the stored markers, either in aggregation or individually, to provide information relevant to use of the space.

However, Adams discloses an apparatus comprising a second arrangement arranged to decay with time the strength values associated with the markers after the markers have been stored, either taken in location-dependent aggregations or individually (i.e., timing information 114 in the form of time-decaying markers left by various agents 120 that visit node 100 may also provide useful information to agents 120 that visit the node subsequently. For example, an index agent 122 carrying index block data (loaded agent) and sampling network nodes, may leave a time-decaying signal in memory store

114 to mark how recently it has been to node 100. If loaded index agent 122 revisits node 100 and samples store 114 before the signal decays, it will recognize that it has been to node 100 recently. If the decay time is selected to reflect, for example, the average time between data retrieval and deposits for an agent, an agent recognizing its own time marker at a node can assume that it already sampled the node with its current data load and need not sample the node's data store 130 again) (see col. 5, lines 20-35).

Sumi discloses an apparatus wherein data about the current strength of the stored markers of multiple locations is used to provide an information item relevant to use of the space (see abstract)--- One skilled in the art would immediately conceptualize that as the user moves from location to location, data corresponding to the user's interests and data relevant to the use of the location is being provided to the user. Also, it is worth noted, it would have also been obvious to one of ordinary skill in the art to conceptualize (referring to Sumi) that as the visitor moves from location to location, the strength value associated with the location where the user is located will be increased to facilitate the displaying of information (personal interests) to the visitor (see Sumi's abstract).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention to combine the teachings as described by the references to arrive at the claimed invention. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been to enhance user's participation by providing to the user information based on estimated interests.

Regarding claims 50 and 51, Kabala discloses a method and apparatus (see claims 1 and 26 rejections) wherein causing the strength values associated with the markers to

decay with time comprises causing the strength values to decay to limit the lifetime of the markers (i.e., decaying with time) (i.e., the signal strength of the attendee is getting weaker as the attendee is moving away from the location) (see col. 5, lines 1-29, and col. 6, lines 1-45). **Also refer to Adams col. 5, lines 20-44).**

4. Claims 17 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kabala and Sumi, in further view of Dempsey, Pub. No. US 20020165731.

Regarding claim 17, Kabala and Sumi discloses a method as described above (see claim 1 rejection).

Although the combination discloses a method as described, Kabala does not specifically disclose a method comprising presenting, as said information item, an image of a virtual landscape defined by the relative strengths of location-dependent marker aggregations mapped to a representation of the space.

However, Dempsey discloses a method wherein a location-determining module sends the current location of the attendee to the attendee display location where it is displayed on a map of the tradeshow floor (see page 5, paragraph 30).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings to arrive at the claimed invention. A motivation for doing so would have been to have a method capable of determining the current location of a tradeshow attendee (see page 5, paragraph 30).

Regarding claim 41, the combination discloses an apparatus as described above (see claim 26 rejection).

Although the combination discloses an apparatus as described, the combination does not specifically discloses an apparatus wherein the third arrangement is arranged to present, as said information, an image of a virtual landscape defined by the relative strengths of location-dependent marker aggregations mapped to a representation of the space.

However, Dempsey discloses an apparatus wherein a location-determining module sends the current location of the attendee to the attendee display location where it is displayed on a map of the tradeshow floor (see page 5, paragraph 30).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings to arrive at the claimed invention. A motivation for doing so would have been to have a method capable of determining the current location of a tradeshow attendee (see page 5, paragraph 30).

6. Claims 18-22, 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kabala, Adams, and Sumi, in further view of Chu et al. (Chu) Pub. No. US 20020174021.

Regarding claims 18, the combination discloses a method as described above (see claim 1 rejection).

Although the combination discloses a method for collecting location data within a facility (see Kabala col. 2, lines 42-43) wherein the information comprises information about a path through the space (i.e., location of the objects or persons traveled within the facility) (see Kabala col. 2, lines 55-56), the combination does not specifically disclose a method wherein said information item comprises information about a path through the

space, this information being derived by determining a path that follows ridges in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses a method wherein an optimized path is automatically computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the arts as described to arrive at the claimed invention. A motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 19, the combination discloses a method as described above (see claim 1 rejection).

Although Kabala discloses a method for collecting location data within a facility (see col. 2, lines 42-43) wherein the information comprises information about a path through the space (i.e., location of the objects or persons traveled within the facility) (see col. 2, lines 55-56), the combination does not specifically disclose a method wherein said information item comprises information about a path through the space, this information being derived by determining a path that follows troughs in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses a method wherein an optimized path is automatically

computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 20, the combination discloses a method as described above (see claim 1 rejection).

Although Kabala discloses a method for collecting location data within a facility (see col. 2, lines 42-43) wherein the information comprises information about a path through the space (i.e., location of the objects or persons traveled within the facility) (see col. 2, lines 55-56), the combination does not specifically disclose a method wherein said information item comprises information about a path through the space, this information being derived by determining a path that avoids ridges in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses a method wherein an optimized path is automatically computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being

deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 21, the combination discloses a method as described above (see claim 1 rejection).

Although Kabala discloses a method for collecting location data within a facility (see col. 2, lines 42-43) wherein the information comprises information about a path through the space (i.e., location of the objects or persons traveled within the facility) (see col. 2, lines 55-56), wherein said information item comprises information about a path through the space, this information being derived by determining a path that avoids troughs in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses a method wherein an optimized path is automatically computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both arts to arrive at the claimed invention. A

motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 22, the combination discloses a method as described above (see claim 1 rejection).

Although Kabala discloses a method as described above, the combination does not specifically disclose a method involving using the current-strength data to predict a next location for a further user moving through the space having regard to that user's current location, this predicted next location then being used to provide to a mobile device of the further user, as said information, either the identify of media items associated with that predicted next location or the items themselves.

However, Chu discloses a method wherein a shopping path is recomputed using the user current location as a starting point, wherein the computed list anticipates the user next location for purchasing or identifying a specific item (see page 6, paragraph 59).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to provide to the user updated information as the user move through the facility.

Regarding claim 42, the combination discloses an apparatus as described above (see claim 26 rejection).

Although kabala discloses an apparatus for collecting location data within a facility (see col. 2, lines 42-43) wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data (i.e.,

location of the objects or persons traveled within the facility) (see col. 2, lines 55-56), the combination does not specifically disclose an apparatus wherein the third arrangement is arranged to derive information about a path through the space by determining a path that follows ridges in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses an apparatus wherein an optimized path is automatically computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 43, the combination discloses an apparatus as described above (see claim 26 rejection).

Although kabala discloses an apparatus for collecting location data within a facility (see col. 2, lines 42-43) wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data (i.e., location of the objects or persons traveled within the facility) (see col. 2, lines 55-56), the combination does not specifically disclose an apparatus wherein the third arrangement is arranged to derive information about a path through the space by determining a path that

follows troughs in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses an apparatus wherein an optimized path is automatically computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 44, the combination discloses an apparatus as described above (see claim 26 rejection).

Although kabala discloses an apparatus for collecting location data within a facility (see col. 2, lines 42-43) wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data (i.e., location of the objects or persons traveled within the facility) (see col. 2, lines 55-56), the combination does specifically disclose an apparatus wherein the third arrangement is arranged to derive information about a path through the space by determining a path that avoids ridges in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses an apparatus wherein an optimized path is automatically

computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 45, the combination discloses an apparatus as described above (see claim 26 rejection).

Although kabala discloses an apparatus for collecting location data within a facility (see col. 2, lines 42-43) wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data (i.e., location of the objects or persons traveled within the facility) (see col. 2, lines 55-56), the combination does not specifically disclose an apparatus, wherein the third arrangement is arranged to derive information about a path through the space by determining a path that avoids troughs in a virtual landscape defined by the relative strengths of location-dependent aggregations of markers.

However, Chu discloses an apparatus wherein an optimized path is automatically computed based upon particular items in an inventory (see abstract), wherein the computed path may be consulted while the user follows the path (see paragraph 28). Thus, one skilled in the art would immediately comprehend as the marker being

deposited, the information is being used to determine location information, which inherently may be path that follows or avoids certain directions including ridges troughs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to facilitate the traffic flow of the attendee within the facility.

Regarding claim 46, the combination discloses an apparatus as described above (see claim 26 rejection).

Although Kabala discloses an apparatus as described above, the combination does not specifically disclose a method wherein the third arrangement is arranged to use the current-strength data to predict to predict a next location for a further user moving through the space having regard to that user's current location, the third arrangement being further arranged to use the predicted next location to provide to a mobile device of the further user, as said information, either the identify of media items associated with that predicted next location or the items themselves.

However, Chu discloses an apparatus wherein a shopping path is recomputed using the user current location as a starting point, wherein the computed list anticipates the user next location for purchasing or identifying a specific item (see page 6, paragraph 59).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to combine the arts to arrive at the claimed invention. A motivation for doing so would have been to provide to the user updated information as the user move through the facility.

Allowable Subject Matter

7. Claims 5 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Louis Desir whose telephone number is (571) 272-7799. The examiner can normally be reached on Monday-Friday 8:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11/09/2007

JEAN GELIN
PRIMARY EXAMINER